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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/676,121   | 10/02/2003  | Takashige Iwamura    | 566.43181X00        | 6028             |
| 24956  | 7590        | 03/24/2006           | EXAMINER            |                  |
| MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.<br>1800 DIAGONAL ROAD<br>SUITE 370<br>ALEXANDRIA, VA 22314 |             |                      | ELMORE, STEPHEN C   |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2185                |                  |
| DATE MAILED: 03/24/2006  |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/676,121 | <b>Applicant(s)</b><br>IWAMURA ET AL. |  |
|                              | <b>Examiner</b><br>Stephen Elmore    | <b>Art Unit</b><br>2185               |  |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-12, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*SEm*  
**STEPHEN C. ELMORE**  
**PRIMARY EXAMINER**

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/8/04, 1/27/05</u> . | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

1. This Office action responds to the application filed October 2, 2003.
2. Claims 1-16 are presented for examination

***Drawings***

3. The drawings are objected to because:
  - a. in Figure 2, element 211, "SXSTEM" is misspelled.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR § 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. The disclosure is objected to because:
  - a. the Specification contains undefined acronyms which need to be identified;
  - b. page 9, line 19, "Erthrnet" is misspelled;

**Appropriate correction is required.**

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-12, 15 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite because:

*the following language lacks proper antecedent basis,*

Claim 1,

- a. lines 4-5, "writes them";
- b. line 13, "the storage area";

Claim 5,

- c. line 5, "store them";

Claim 7,

- d. line 10, "the duplication";

Claim 11,

- e. line 10, "the duplication";

Claim 12,

- f. line 10, "the duplication";

*the following language represents non-idiomatic English usage,*

Claim 6,

- g. line 4, "continuing a processing";

Claim 7,

- h. line 4, "continuing the processing" (a processing of what activity?);
- i. line 10, "resuming processings";

Claim 8,

- j. line 4, "continuing the processing" (a processing of what activity?);
- k. line 10, "resuming processings";
- l. line 10, "the duplication";

Claim 9,

- m. line 4, "continuing a processing" (a processing of what activity?);

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Claim 10,

- n. line 4, "continuing a processing" (a processing of what activity?);

Claim 11,

- o. line 10, "resuming processings";

Claim 12,

- p. line 4, "continuing the processing" (a processing of what activity?);
- q. line 10, "resuming processings";

Claims 15 and 16,

- r. line 4, "and a processing";

claims 2-4 inherit the deficiencies of the previous claim in the claim dependency chain.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Cochran et al., US 2004/0230859 (Cochran).

Cochran teaches the claimed method of duplicating data in a system including a first site, a second site, and a third site, each of the sites including a computer and a storage subsystem, comprising the steps of:

- a. duplicating data in the first site...taught as mirroring at the first site, Figure 6, element 610;

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b. transferring update data of the first storage area (Data Center 1, Site 1, Figure 6) to the second site (Site 2, Figure 6) by synchronous remote copy, is taught as the update of data over the "L1" synchronous link, [0021], to Site 2, Figure 6;

c. transferring update data of the second storage area (Site 1 - Mirror) to the third site (Site 3, Figure 6) by an asynchronous remote copy is taught as data update from Mirror (Site 1 to Site 2) and then to Site 3 via "L3" asynchronous remote copy, since the update data in Mirror (Site 1) is the same update data as mirrored in Mirror (Site 2), which is updated to Site 3 over L3 asynchronous remote copy link, Figure 6.

***Allowable Subject Matter***

7. Claims 13 and 14 are allowable over the current prior art of record.
8. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
9. Claims 2-4, 15 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Elmore whose telephone number is (571) 272-4436. The examiner can normally be reached on Mon-Fri from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 19, 2006

  
**STEPHEN C. ELMORE**  
**PRIMARY EXAMINER**